

Claims

1. A process of alleviating or protecting against the symptoms of a medical disorder involving accelerated rates of apoptosis or necrosis in a mammalian body, said disorder being selected from radiation exposure disorders; chemical exposure and ingestion disorders; neurological disorders; and physical trauma disorders; which comprises reducing the rate of or susceptibility to apoptosis or necrosis of tissues and organs of the mammalian body by (a) reacting an aliquot of blood from the mammalian body ex vivo with at least one stressor selected from the group consisting of a temperature above or below body temperature, ultraviolet light, and an oxidative environment and (b) administering the aliquot of blood treated in step (a) to the mammalian body.

2. The process of claim 1 wherein the aliquot of blood has a volume from about 0.1 - 100 ml.

3. The process of claim 2 wherein said at least one stressor is a temperature in the range from about -5° - 55°C .

4. The process of claim 2 wherein said at least one stressor is a temperature in the range from about 40° - 50°C .

5. The process of claim 2 wherein said at least one stressor is an oxidative environment comprising a mixture of ozone and medical grade oxygen, bubbled through the blood aliquot.

6. The process of claim 5 wherein the gaseous mixture has an ozone content of from about 10 - 100 μg per ml.

claim 1 or 2?
The process of claim 5 wherein said at least one stressor is ultraviolet light in the UV-C band wavelength.

8. The process of claim 2 wherein all three said stressors are applied to the aliquot simultaneously.
9. The process of claim 8 wherein said stressors are applied for a period of time from 0.5 to 60 minutes.
10. The process of claim 9 wherein the time is from about 2 - 5 minutes.
11. The process of claim 2 wherein the medical disorder is a radiation exposure disorder.
12. The process of claim 11 wherein the disorder is a nuclear radiation exposure disorder, a therapeutic radiation exposure disorder, an X-ray exposure disorder or an ultraviolet light exposure skin disorder.
13. The process of claim 2 wherein the medical disorder is a chemical exposure or chemical ingestion disorder.
14. The process of claim 13 wherein the disorder is chemical poisoning; food poisoning from bacterial toxins; toxic drug ingestion overdoses and side effects; disorders from exposure to nerve gases and mustard gas; liver disorders from chemicals and toxins; kidney disorders resulting from ingestion of aminoglycoside antibiotics, radiographic contrast dyes or cyclosporin nephrotoxicity; hematopoietic disorders and immunodeficiency disorders derived from drug or toxin induced bone marrow suppression; infections from bacterial toxins; ozone exposure; solvent exposure; or the effects of immunosuppressants.
15. The process of claim 2 wherein the medical disorder is a neurological disorder.
16. The process of claim 15 wherein the neurological disorder is Parkinson's disease, senile dementia, or Alzheimer's disease..
17. The process of claim 2 wherein the medical disorder is a physical trauma disorder.

18. The process of claim 17 wherein the physical trauma disorder is a physical trauma resulting from wounding, burns, loss of blood or physical accident.

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